

Amendments to the Claims

Please amend the pending claims as follows:

Claims 1-31. (Canceled)

32. (Currently Amended) A traffic volume measurement method for controlling at least one radio bearer, comprising:

- receiving, from an upper layer, measurement information including lower and upper values ~~a lower and an upper value~~ of permissible traffic volume for a transport channel;
- receiving buffer occupancy from a radio link control (RLC) layer for each logical channel related to the transport channel, the buffer occupancy for each logical channel related to the transport channel including an amount of data protocol data units (PDUs) and an amount of control PDUs; ~~protocol data units (PDUs);~~
- measuring traffic volume for the transport channel by summing the buffer occupancy for each logical channel related to the transport channel;
- comparing the measured traffic volume to the lower or upper value; and
- reporting buffer occupancy information to the upper layer, if the measured traffic volume is larger than the upper value or lower than the lower value.

33. (Previously Presented) The method of claim 32, wherein the buffer occupancy information reported to the upper layer includes buffer occupancy information for each of the at least one radio bearer mapped to the transport channel.

34. (Previously Presented) The method of claim 32, wherein each operation of the method is performed by a media access control (MAC) entity.

35. (Previously Presented) The method of claim 32, wherein the buffer occupancy information includes at least one of a buffer occupancy, an average of buffer occupancy, and a variance of buffer occupancy, for each of the at least one radio bearer.

36. (Previously Presented) The method of claim 32, wherein the measurement of the traffic volume is performed every transmission time interval (TTI).

37. (Previously Presented) The method of claim 35, wherein the buffer occupancy for each logical channel related to the transport channel represents an occupancy of an RLC buffer of an RLC entity.

38. (Previously Presented) The method of claim 36, wherein the measurement information further includes a time interval for calculating at least one of an average and a variance of the buffer occupancy for each logical channel related to the transport channel.

39. (Previously Presented) The method of claim 32, wherein the upper layer is a radio resource control (RRC) layer.

40. (Currently Amended) A traffic volume measurement method for controlling at least one radio bearer, comprising:
receiving measurement information including a reporting period from an upper layer;
receiving buffer occupancy for each logical channel related to a transport channel from a radio link control (RLC) layer, the buffer occupancy for each logical channel related to the transport channel including an amount of data protocol data units (PDUs) and an amount of control PDUs; ~~protocol data units (PDUs);~~
reporting buffer occupancy information to the upper layer when a reporting period elapses.

41. (Previously Presented) The method of claim 40, wherein each operation of the method is performed by a media access control (MAC) entity.

42. (Previously Presented) The method of claim 40, wherein the buffer occupancy information reported to the upper layer includes buffer occupancy information for each of the at least one radio bearer mapped to the transport channel.

43. (Previously Presented) The method of claim 40, wherein the buffer occupancy information includes at least one of a buffer occupancy, an average of buffer occupancy, and a variance of buffer occupancy, for each of the at least one radio bearer.

44. (Previously Presented) The method of claim 40, wherein the buffer occupancy for each logical channel related to the transport channel represent an occupancy of an RLC buffer of an RLC entity.

45. (Previously Presented) The method of claim 40, wherein the upper layer is a radio resource control (RRC) layer.

46. (Previously Presented) The method of claim 40, wherein the measurement information further includes a time interval for calculating at least one of an average and a variance of the buffer occupancy for each logical channel related to the transport channel.

47. (Currently Amended) A method of controlling at least one radio bearer, comprising:

transferring measurement information to a media access control (MAC) entity, the measurement information including information on whether to perform an event-triggered measurement mode or a periodic measurement mode;

receiving buffer occupancy information from the MAC entity according to the measurement mode, the buffer occupancy information being obtained by using buffer occupancy of each logical channel mapped to a transport channel, wherein the buffer occupancy includes an amount of data protocol data units (PDUs) and an amount of control PDUs; the amount of
~~control protocol data units (PDUs); and~~

performing reconfiguration of the at least one radio bearer based on the buffer occupancy information.

48. (Previously Presented) The method of claim 47, wherein the buffer occupancy information includes buffer occupancy information for each of the at least one radio bearer mapped to the transport channel.

49. (Currently Amended) The method of claim 47, wherein, when the measurement mode is the event-triggered measurement mode, the measurement information further includes ~~including~~ an upper limit and a lower limit.

50. (Previously Presented) The method of claim 49, further comprising:
measuring traffic volume by summing buffer occupancy of each logical channel mapped to a transport channel; and
comparing the measured traffic volume to the upper limit or the lower limit.

51. (Previously Presented) The method of claim 50, wherein the measuring and comparing operations are performed in the MAC entity.

52. (Previously Presented) The method of claim 47, wherein, when the measurement mode is the periodic measurement mode, the measurement information further includes a reporting period.

53. (Previously Presented) The method of claim 48, further comprising checking whether a reporting period is elapsed in the MAC entity.

54. (Previously Presented) The method of claim 47, wherein each operation of the method is performed in a radio resource control (RRC) layer.

55. (Previously Presented) The method of claim 47, wherein the buffer occupancy information includes at least one of a buffer occupancy, an average of buffer occupancy, and a variance of buffer occupancy, for each radio bearer.

56. (Currently Amended) The method of claim 47, wherein the buffer occupancy of each logical channel mapped to a ~~transport~~ the transport channel is transmitted from a radio link control (RLC) layer to the MAC entity.